NOTEWORTHY VASCULAR PLANTS FROM GRENADA COUNTY, MISSISSIPPI

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ABSTRACT

A floristic study of Grenada County, Mississippi, in 1986 and 1987, documented 996 species of vascular plants. Of these, four taxa are new records for the state: *Equisetum arvense* L., *Dryopteris* × *australis* (Wherry) Small, *Cyperus lancastriensis* Porter, and *Angelica atropurpurea* L. In addition, species that represent significant range extensions and species considered rare or threatened in Mississippi are reported from Grenada County.

INTRODUCTION

Grenada County is located in north central Mississippi about 160 km north of Jackson, MS, and about 160 km south of Memphis, Tennessee. The topography is highly varied with three physiographic regions: the nearly flat alluvial plain in the western part of the county known as the Delta; the Loess Bluffs, a long north-south line of hills arising abruptly at the eastern edge of the Delta; and the North Central Plateau, an ancient, eroded plateau in the eastern part of the county (Lowe 1921). In addition the Yalobusha River flows east to west through the north central part of the county forming a floodplain in each physiographic region with the resultant topography even more heterogeneous. One of the first surveys done in northern Mississippi included areas north and south of Grenada County, but did not include any part of the Yalobusha River Basin (Harper 1913). Other than the Upper Pearl River Basin (McDaniel 1983, Smith 1985), few drainage systems in the northern half of Mississippi have been thoroughly investigated.

Soils in the study area are of three physiographic regions and are quite diverse. The soils of the Delta Region are primarily of the Alligator-Forestdale association and are fine-textured and poorly drained. Soil associations of the Loess Bluff Region are the Memphis, Memphis-Guin, Memphis-Loring, and Providence-Loring-Ruston, which are silty, sandy or gravelly soils that are generally non-acid. The main soil associations of the North Central Plateau Region are the Ruston-Cuthbert-Providence, Tippah-Boswell-Dulac, and Ruston-Providence, which are upland sandy, clayey, or silty soils that tend to have a low pH and are poorly to well drained (Thomas and Bowen, 1967).

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Herbarium specimens cited below are at IBE, MISSA, MISS, ctb (personal herbarium of Charles T. Bryson), mwm (personal herbarium of M. Wayne Morris), and SWSL (Southern Weed Science Lab, Stoneville, MS). Specimens collected by the author were deposited in IBE, DSC, MICH, MISSA, MMNS, NLU, SWSL, TENN, VDB, and other herbaria.

NOTEWORTHY VASCULAR PLANTS

EQUISETACEAE. **Equisetum arvense** L. LOESS BLUFF REGION: ca 6 mi S of Holcomb, locally abundant in sand washed down from N-facing bluffs along Black Creek, plants usually beneath an overstory of *Populus, Salix, Carpinus, Platanus,* and *Ulmus* and occasionally on open sandbars, sterile plants far outnumber fertile individuals, *Equisetum hyemale* also at this locality, 28 Mar 1986, *Morris 590* (IBE, DSC, MISSA, MMNS). This is the first documentation of *E. arvense* in Mississippi.

LYCOPODIACEAE. **Lycopodium appressum** (Chapman) Lloyd and Underwood. NORTH CENTRAL PLATEAU REGION: ca 4 mi SE of Gore Springs, in an open sandy bog with *Drosera* and *Xyris*, 30 Apr 1987, *Morris 2803* (IBE). This marks the northernmost occurrence of the species in Mississippi. The nearest known locality is in the Interior Flatwoods Region of Oktibbeha County, about 80 km SE of Grenada County.

ASPIDIACEAE. **Dryopteris × australis** (Wherry) Small. LOESS BLUFF REGION: ca 3 mi NW of Holcomb, around the edge of a spring grading into a small swamp forest and at the base of a S-facing bluff in close proximity to the Delta, population of about 15 individuals, 3 Jul 1987, *Morris 2910* (IBE, MICH, MMNS, SWSL). A rare fern known only in a few localities in its range limited to the southeastern United States, *D. X australis* is reported for the first time in Mississippi and is now the only member of the genus known in the state. Neither of the parent species, *D. celsa* nor *D. ludoviciana*, is known in Mississippi (Werth et al. in press).

Thelypteris noveboracensis (L.) Niewland. NORTH CENTRAL PLATEAU REGION: ca 4 mi SE of Gore Springs, population of about 200 plants on a seepage slope and in a boggy springhead with *Osmunda, Woodwardia, Athyrium*, and *Isotria verticillata*, 21 Jun 1987, *Morris 2896* (IBE). *Thelypteris noveboracensis* was previously known in Mississippi only from the Tennessee River Hills Region in the extreme northeastern part of the state. The following is one of the localities: Monroe County, ca 5.5 mi NE jct MS 8 & US 45, boggy woods with *Magnolia virginiana*, 28 Apr 1987, *McDaniel 29325* (IBE).

CYPERACEAE. **Carex decomposita** Muhl. DELTA REGION: ca 2 mi W of Holcomb, epiphytic on *Taxodium* in a bald cypress-water tupelo swamp, several clumps seen, 12 May 1987, *Morris 2837* (ctb, IBE). Grenada is

only the ninth county in Mississippi where this relatively rare and unusual sedge has been documented.

Carex grayi Carey. DELTA REGION: ca 6 mi SW of Holcomb, scattered population in a bottomland hardwood forest near an oxbow lake, plants densely cespitose, 30 Apr 1987, *Morris 2790* (ctb, IBE, SWSL); *Morris 2869* (ctb, IBE, MICH, NLU, TENN). This is an uncommon sedge in northern Mississippi, and this collection is the first from the Delta Region. Other populations are mainly in areas drained by the Tombigbee River, especially in the Black Prairie Region, about 128 km due E.

Carex stricta Lam. NORTH CENTRAL PLATEAU REGION: ca 5 mi SE of Gore Springs in a sphagnous bog that grades into a beaver pond, forming large tussocks in standing water and also in the bog proper with the other sedges *Carex atlantica, C. laevivaginata, C. styloflexa, C. leptalea, C. crinita*, and *C. lurida*, 20 Apr 1987, *Morris 2775* (ctb, IBE). *Carex stricta* is a rare plant in Mississippi, Grenada being the fifth and southwesternmost county where it has been documented. It was first collected in Tishomingo County and later in the North Central Plateau Region in Oktibbeha County (Bryson 1984) and Lafayette County (Charles T. Bryson, pers. comm. 1987).

Cyperus haspan L. NORTH CENTRAL PLATEAU REGION: ca 1 mi NNW of Gore Springs, locally common in a sphagnous seepage bog with *Xyris, Fuirena, Rhynchospora, Gratiola pilosa, Eryngium integrifolium, Juncus canadensis*, and *Thelypteris palustris*, 3 Sep 1987, *Morris 3015* (IBE). This is the northernmost record of *C. haspan* in Mississippi. The nearest known population is in Kemper County (7 Oct 1967, *McDaniel 9903*, IBE), which is about 160 km SE of the Grenada County site.

Cyperus lancastriensis Porter. LOESS BLUFFS-NORTH CENTRAL PLATEAU TRANSITION AREA: ca 1 mi E Tie Plant, in sandy soil in mixed pine-hardwoods on a bluff overlooking the Batupan Bougue, occurring with *Cyperus plukenetii, Commelina erecta*, and *Bonamia humistrata*, 12 Jul 1986, *Morris 2285* (IBE). This represents the first collection of the species in Mississippi. In 1987 the species has been reported from three additional counties: Lee (Bishop 1987), Itawamba, and Tishomingo (Charles T. Bryson, pers. comm. 1987) in the Tennessee River Hills Region, about 120-144 km due northeast. *Cyperus lancastriensis* is reported as mainly occurring in the mountains and piedmont in the Carolinas (Radford et al. 1968). These Mississippi populations are evidently some of the few outliers that occur in the coastal plain.

Eleocharis tenuis (Willd.) Schultes. NORTH CENTRAL PLATEAU REGION: ca 4 mi SE of Gore Springs, along a spring branch underneath a

thicket of *Viburnum nudum, Pyrus arbutifolia, Ilex verticillata*, and *Rhododendron canescens* and in an open sandy bog adjacent to the spring branch with *Drosera, Xyris*, and *Lycopodium*, 30 Apr 1987, *Morris 2804* (IBE). This sedge was not previously known from the North Central Plateau, and it appears to be most common in the Interior Flatwoods, about 45 km due east.

Eleocharis tuberculosa (Michx.) R. & S. NORTH CENTRAL PLATEAU REGION: ca 5 mi SE of Gore Springs, in a sphagnous bog at the edge of a pond, associated with *Fuirena squarrosa, Gentiana saponaria*, and *Bartonia paniculata*, 11 Oct 1986, *Morris 2686* (IBE). This population represents the most northern occurrence of *E. tuberculosa* known in Mississippi. The sedge is mainly found south of a line from Jackson to Meridian with another peripheral population in Winston County, about 90 km SE of Grenada County (Randy Warren, Graduate Student, Department of Biological Sciences, Mississippi State University, Mississippi State, MS, pers. comm. 1986).

Rhynchospora miliacea (Lam.) Gray. LOESS BLUFF REGION: ca 3 mi NW of Holcomb, in a swamp forest at the base of a S-facing bluff in close proximity to the Delta, locally abundant, 24 May 1986, *Morris 1049* (IBE). Populations in Grenada County are the only ones in the state north of Jones County (Morgan 1979), which is about 230 km due SSE.

Scirpus lineatus Michx. LOESS BLUFF REGION: ca 4 mi SW of Holcomb, in a wet meadow at the base of a S-facing bluff, associated with *Rudbeckia fulgida, Aster novae-angliae*, and *Silphium perfoliatum*, 12 May 1987, *Morris 2830* (IBE). This collection constitutes the first record of the species from the Loess Bluffs. The nearest known locality for *S. lineatus* is about 120 km due ESE in the calcareous Black Prairie Region in Oktibbeha County (15 May 1982, *Carter 3010*, IBE).

Scleria reticularis Michx. NORTH CENTRAL PLATEAU REGION: ca 4 mi SE of Gore Springs, in an open boggy springhead, rare, 3 Oct 1986, *Morris 2664* (IBE). *Scleria reticularis* is found mainly in the savannas and pitcher-plant bogs of south Mississippi. The closest record in the state is about 280 km due SSE in Greene County (4 Sep 1979, *Gordon 1443*, IBE).

LILIACEAE. **Melanthium virginicum** L. NORTH CENTRAL PLATEAU REGION: ca 7.5 mi NNE of Gore Springs, population of about 25 individuals in mucky soil along a spring branch with *Viburnum nudum, Ilex verticillata, Platanthera clavellata*, and *Oxypolis rigidior*; few plants flowering, 15 Jul 1987, *Morris 2930* (IBE). This member of the lily family is relatively rare in Mississippi. The nearest known populations are in the Tennessee River Hills and the Longleaf Pine Belt in extreme northeastern and southern Mississippi, respectively.

ORCHIDACEAE. **Calopogon tuberosus** (L.) BSP. NORTH CENTRAL PLATEAU REGION: at the edge of a large mat of *Sphagnum* in an open sandy bog with *Xyris torta, Rhynchospora globularis, Solidago patula, Chasmanthium laxum, Pyrus arbutifolia*, and *Rhododendron canescens*, local, 14 June 1987, *Morris 2888* (mwm). A fairly common species in the savannas and pitcher-plant bogs in the southern part of the state, *C. tuberosus* becomes very rare and local northward in Mississippi. There are two other known localities for this orchid in the North Central Plateau: Lafayette County, about 70 km NNE of the Grenada County population (7 Jul 1958, *Temple s.n.*, MISS), and in Winston County, which is about 90 km due southeast.

Cypripedium pubescens Willd. LOESS BLUFF REGION: about 20 plants, in rich ravines and on steep slopes, associated with *Magnolia acuminata, Acer barbatum, Ulmus rubra, Fagus, Liriodendron, Uvularia grandiflora, Trillium recurvatum, Phlox divaricata, Panax quinquefolium*, and *Cynoglossum virginianum*, 9 Apr 1987, *Morris 2750* (IBE). This orchid is rare and local throughout its range in northern Mississippi.

Platanthera cristata (Michx.) Lindley. NORTH CENTRAL PLATEAU REGION: population of about 15 individuals, in a sphagnum bog at the edge of a beaver pond, associated with *Pyrus arbutifolia, Viburnum nudum, Bartonia paniculata, Fuirena squarrosa*, and *Xyris torta*, 31 Jul 1986, *Morris 2405* (IBE). Considered rare, *P. cristata* is primarily found in the southern part of the state, occurring as isolated populations in the northern part of the state.

Platanthera lacera (Michx.) G. Don. NORTH CENTRAL PLATEAU REGION: along a stream, in rich deciduous woods in partial sun, rare, 19 May 1986, *Morris 996* (mwm). *Platanthera lacera* was previously known in the state only from Webster County (Travis Salley, Cleveland, MS, pers. comm. 1986), also located in north central Mississippi.

Platanthera peramoena Gray. LOESS BLUFFS-NORTH CENTRAL PLATEAU TRANSITION AREA: in the Yalobusha River floodplain in low, wet woods with *Acer rubrum, Salix nigra*, and *Fraxinus pensylvanica* in the overstory, local population of 9 individuals, 3 Jul 1987, *Morris 2913* (IBE). This rare orchid is found at scattered localities in northern Mississippi.

Spiranthes ovalis Lindley. DELTA REGION: on a natural levee above a bayou in well-drained bottomland hardwoods, uncommon, 21 Sep 1986, *Morris 2634* (IBE). NORTH CENTRAL PLATEAU REGION: in rich deciduous woods on terraces along a stream, scattered locally, 7 Oct 1986, *Morris 2677* (IBE). This species is listed as rare in the state, and the record from the North Central Plateau is the first for that land resource area.

POACEAE. **Oplismenus setarius** (Lam.) R. & S. LOESS BLUFFS -

DELTA TRANSITION AREA: ca 0.75 mi NW of Holcomb, in low, rich woods near a bald cypress-water tupelo swamp in the Yalobusha River floodplain, local population of about 50 individuals, 17 Sep 1987, *Morris 3046* (IBE). This is the most northern record of the species in Mississippi.

Sporobolus junceus (Michx.) Kunth. NORTH CENTRAL PLATEAU REGION: ca 1.5 mi N of Gore Springs, in sandy soil in upland mixed pine-hardwoods, associated with *Aster concolor, Chrysopsis graminifolia*, and *Andropogon ternarius*, 7 Oct 1986, *Morris 2670* (IBE). This species primarily occurs in pinelands and on sandhills in the southern part of the state with very scattered populations northward to Tishomingo (25 Oct 1970, *Thompson 71*, MISS), and Grenada counties.

Trisetum pensylvanicum (L.) P. Beauv. ex R. & S. NORTH CENTRAL PLATEAU REGION: ca 2.5 mi NNW of Gore Springs, in a boggy springhead with much *Sphagnum*, 16 Apr 1986, *Morris 739* (IBE). *Trisetum pensylvanicum* is uncommon in sphagnum bogs and along spring branches of northern Mississippi. The nearest known population is in Lafayette County (27 Apr 1966, *Pullen 66161*, MISS), about 70 km NNE of the Grenada County population.

XYRIDACEAE. **Xyris difformis** Chapman var. **curtissii** (Malme) Kral. NORTH CENTRAL PLATEAU REGION: ca 1 mi NNW of Gore Springs, in a sphagnous seepage bog, at least fifty plants seen, associated species include *Xyris torta, Gratiola pilosa, Eryngium integrifolium, Hypericum crux-andreae*, and *Thelypteris palustris*, 3 Sep 1987, *Morris 3016* (IBE, VDB). This is the northernmost documented population of *X. difformis* var. *curtissii* in Mississippi.

APIACEAE. **Angelica atropurpurea** L. LOESS BLUFF REGION: ca 3 mi NW of Holcomb, scattered throughout a low, wet woods at the base of a S-facing bluff in close proximity to the Delta, associated with *Rudbeckia fulgida, Scirpus lineatus, Carex bromoides, Platanthera flava, Hypericum walteri, Dasistoma macrophylla,* and *Impatiens capensis*, 1 Aug 1986, *Morris 2408* (IBE). This member of the Apiaceae was not known in Mississippi prior to 1986. It is now also known from Tallahatchie County (Robert Stewart, Prof. of Biol. Sci., Delta State University, Cleveland, MS, pers. comm. 1986; Phillip Barbour, Sidon, MS, pers. comm. 1986), which borders Grenada County to the northwest.

ASCLEPIADACEAE. **Asclepias purpurascens** L. DELTA REGION: ca 6 mi W of Holcomb, in well-drained bottomland hardwoods, local, 29 Jul 1986, *Morris 2380* (IBE). Previously only documented twice in northwestern Mississippi, *A. purpurascens* was reported by Lowe (1921) from DeSoto County, and it is also known from Washington County (May

1985, *Saucier s.n.*, SWSL). This latter population is probably extirpated.

ASTERACEAE. **Aster puniceus** L. NORTH CENTRAL PLATEAU REGION: ca 2.5 mi NNW of Gore Springs, in a boggy springhead with much *Sphagnum*, 7 Oct 1986, *Morris 2679* (IBE, VDB). This species was previously known only in the state from Lauderdale County in east central Mississippi (14 Oct 1978, *McDaniel 22172*, IBE), about 170 km due SE. These stations represent southern range extensions of the species' more northern general range.

Aster sericocarpoides (Small) Schumann. NORTH CENTRAL PLATEAU REGION: ca 4 mi SE of Gore Springs, in an open sandy bog and along the adjacent spring branch, associated with *Platanthera ciliaris, Xyris torta, Solidago patula, Oxypolis rigidior, Pyrus arbutifolia,* and *Ilex verticillata*, 13 Aug 1987, *Morris 2972* (IBE). *Aster sericocarpoides* is known primarily from boggy situations in southern Mississippi, extending locally into the North Central Plateau and Tennessee River Hill Regions (Itawamba County, *Bailey s.n.*, MISS) farther north.

Vernonia texana (Gray) Small. LOESS BLUFFS-NORTH CENTRAL PLATEAU TRANSITION AREA: ca 1 mi E of Grenada, in dry upland pine-oak-hickory woods near clearcut areas, associated with *Liatris aspera, Asclepias amplexicaulis, Aureolaria flava, Lespedeza hirta, Aster concolor,* and *Agave virginica*, 22 Aug 1987, *Morris 2994* (IBE). This species was known previously from dry uplands in the southwestern part of the state north to Warren County, about 190 km due SW. Another peripheral population is known from the North Central Plateau Region (Calhoun County, 16 Aug 1967, *Temple 6463*, MISS).

BUXACEAE. **Pachysandra procumbens** Michx. LOESS BLUFF REGION: large population of over 5,000 individuals on a NW-facing slope in upland mesophytic forest, profusely flowering, 26 Mar 1986, *Morris 969*, (IBE). *Pachysandra procumbens* is a relatively rare and local species in Mississippi, and most populations infrequently flower or have few individuals that undergo anthesis.

CAMPANULACEAE. **Lobelia appendiculata** A. DC. DELTA REGION: ca 6 mi SW of Holcomb, at edge of bottomland hardwoods in silty soil, rare, 13 May 1986, *Morris 969* (IBE). This represents the first collection of this uncommon lobelia from the Delta Region in Mississippi.

CELASTRACEAE. **Celastrus scandens** L. LOESS BLUFF REGION: ca 1 mi E of Tie Plant, in the transition area between the Loess Bluffs and the North Central Plateau, woody vines climbing 20 ft. into the trees in rich deciduous woods on a NW-facing slope, plants sterile, 27 Sep 1986, *Morris 2654* (IBE). This woody vine is rare and found at scattered localities in the

northern part of the state. It was previously collected from the Loess Bluffs in DeSoto County, about 115 km N of Grenada County (28 Sep 1978, *Rogers 46048*, (IBE, MISS).

DROSERACEAE. **Drosera brevifolia** Pursh. NORTH CENTRAL PLATEAU REGION: ca 4 mi SE of Gore Springs, in an open sandy bog with *Xyris* and *Lycopodium*, scape glandular-pubescent, corolla pink, 30 Apr 1987, *Morris 2802* (IBE). This sundew is of very local occurrence in sandy bogs and seepages in the northern part of the state, becoming more frequent toward the coast.

FAGACEAE. **Quercus hemisphaerica** Bartram. LOESS BLUFFS-NORTH CENTRAL PLATEAU TRANSITION AREA: ca 0.25 mi E of Grenada, trees about 60 ft high in sandy soil in the Batupan Bogue creek bottom, other individuals also on the bluffs immediately E of the Batupan Bogue, associated with *Celtis georgiana, Castanea pumila*, and *Carya pallida*, 17 Sept 1987, *Morris 3047* (IBE). This is the northernmost station in Mississippi for *Q. hemisphaerica*. The nearest populations are in Leake, Lowndes, and Neshoba counties, each at least 115 km distant.

JUGLANDACEAE. **Juglans cinerea** L. LOESS BLUFF REGION: ca 2 mi S of Holcomb, six trees on a N-facing slope above Cane Creek, most individuals about 50 ft. high, associated with *Acer barbatum, Magnolia acuminata, Fagus, Liriodendron, Quercus muehlenbergii, Rhamnus caroliniana, Osmorhiza longistylis*, and *Circaea lutetiana*, 6 Jun 1986, *Morris 2006* (IBE).

LYTHRACEAE. **Cuphea carthagensis** (Jacquin) Macbride. LOESS BLUFFS-NORTH CENTRAL PLATEAU TRANSITION AREA: ca 0.75 mi E of Tie Plant, in wet meadows at the margins of bottomland woods along the Batupan Bogue, 12 Jul 1986, *Morris 2283* (IBE). This population is apparently disjunct. *Cuphea carthagensis* usually occurs in south Mississippi, at least 230 km due SSE (Morgan 1979).

OLEACEAE. **Fraxinus profunda** (Bush) Bush. LOESS BLUFF REGION: ca 3 mi NW of Holcomb, in low, wet woods at the base of a S-facing bluff in close proximity to the Delta, associated with *Taxodium distichum, Populus heterophylla, Itea virginica*, and *Sabal minor*, 1 Aug 1986, *Morris 2407* (IBE). This collection represents the first record of *F. profunda* from the Loess Bluffs in Mississippi. It is known from low woods in Lowndes County, (6 Jun 1970, *McDaniel 13477*, IBE), and the western part of the Delta Region (Gunn et al. 1980).

SAXIFRAGACEAE. **Saxifraga virginiensis** Michx. LOESS BLUFF REGION: ca 2 mi W of Grenada, plants on a steep NW-facing slope among moss-covered rocks and at the bases of large trees, 26 Mar 1986, *Morris 567* (IBE). This is the first documentation of the species from the Loess Bluff

Region. The nearest known population is in the Pontotoc Ridge in Clay County (19 Mar 1968, *McDaniel 10387*, IBE), about 85 km due east.

SCHISANDRACEAE. **Schisandra glabra** (Brickell) Rehder. LOESS BLUFF REGION: ca 5.5 mi SSW of Holcomb, woody vines in a rich wooded ravine climbing at least 40 ft. into the trees in filtered and partial light, profusely flowering, occurring with *Acer barbatum, Magnolia acuminata, Fagus, Liriodendron, Adiantum pedatum, Listera australis, Actaea pachypoda*, and *Uvularia grandiflora*, locally frequent, 6 Jun 1986, *Morris 2003* (IBE). A species considered rare throughout its range in the southeastern United States, *S. glabra* grows exceptionally well in minimally disturbed woods in the Loess Bluffs. It has been collected in sterile condition about 45 km northward in Tallahatchie County (13 May 1980, *Stewart 942*, IBE).

SCROPHULARIACEAE. **Chelone glabra** L. NORTH CENTRAL PLATEAU REGION: ca 2 mi N of Gore Springs, in a boggy springhead with much *Sphagnum*, population of about ten individuals, associated species include *Gentiana saponaria, Osmunda* spp., *Eryngium integrifolium, Cacalia lanceolata, Orontium aquaticum*, and *Oxypolis rigidior*, 19 Sept 1986, *Morris 2620* (IBE). Considered rare in Mississippi, *C. glabra* inhabits seeps, springs, and bogs at widely scattered localities in the North Central Plateau, the Pontotoc Ridge, and the Tennessee River Hills in northern Mississippi.

STAPHYLEACEAE. **Staphylea trifolia** L. LOESS BLUFF REGION: ca 3 mi SW of Holcomb, shrubs usually 5 to 10 ft. high, on terraces along a stream that has cut a ravine and narrow bottom in a "finger" of Loess Bluffs that extend out into the Delta and also on the steep slopes of the ravine, locally abundant in the understory with *Aesculus pavia* and *Lindera benzoin*, herbaceous associates include *Dentaria laciniata, Geranium maculatum, Laportea canadensis*, and *Lobelia siphilitica*, many individuals at anthesis and some with persistent capsules from the previous year, 6 Apr 1987, *Morris 2749* (IBE). This is the first report of *S. trifolia* from the Loess Bluffs in Mississippi. It is considered rare within the state. The nearest known locality is about 90 km due E on calcareous bluffs of the Pontotoc Ridge in Chickasaw County (24 Apr 1980, *Gordon 1653*, IBE).

ULMACEAE. **Ulmus serotina** Sarg. LOESS BLUFF REGION: ca 3 mi NNW of Holcomb, in upland primarily deciduous woods with a few individuals each of *Pinus* and *Juniperus*, most trees about 25-40 ft. high, infrequent, 19 Sep 1986, *Morris 2629* (IBE). This is the first record of *U. serotina* from the northern Loess Bluffs in the state. This elm is most common in the Pontotoc Ridge and Black Prairie Regions in northeastern Mississippi.

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REFERENCES

BISHOP, M. M. 1987. The vascular flora of Tombigbee State Park, Lee County, Mississippi. Master's Thesis, Dept. of Biol., University of Mississippi. 37 pp.

BRYSON, C. T. 1984. Noteworth additions to the *Carex* of Mississippi. Castanea 49:44.

GUNN, C. R., T. M. PULLEN, E. A. STADELBACHER, J. M. CHANDLER, and J. BARNES. 1980. Vascular flora of Washington County, Mississippi, and environs. Science and Education Administration, United States Dept. of Agric., New Orleans, LA. 150 pp.

HARPER, R. M. 1913. A botanical cross-section of northern Mississippi, with notes on the influence of soil on vegetation. Bull. Torrey Bot. Club 40:377 – 399.

LOWE, E. N. 1921. Plants of Mississippi, a list of flowering plants and ferns. Miss. Geol Survey Bull. 17. Hederman Bros., Jackson, MS.

McDANIEL, S. 1983. Checklist of the native woody plants of the Pearl River Basin. The Crosby Arboretum Foundation, Hattiesburg, MS.

MORGAN, D. R. 1979. A floristic study of northeastern Jones County, Mississippi. Master's Thesis, Dept. of Biol. Sci., Miss. State University. 93 pp.

RADFORD, A. E., H. E. AHLES, and C. R. BELL. 1968. Manual of the vascular flora of the Carolinas. The University of North Carolina Press, Chapel Hill. 1183 pp.

SMITH, T. E. 1985. Distribution of woody plants in the Upper Pearl River Basin. Master's Thesis, Dept. Biol. Sci., Miss. State University. 94 pp.

THOMAS, A. E. and C. D. BOWEN. 1967. Soil survey of Grenada County, Mississippi. USDA in Cooperation with the Mississippi Agric. Exper. Sta. 70 pp.

WERTH, C. R., A. M. EVANS, and D. M. E. WARE. The southern woodfern *Dryopteris* × *australis* in Tennessee and Virginia. Castanea (in press).